C

CZECHOSLOVAKIA/Inorganic Chemistry. Complex Compounds.

Abs Jour: Ref Zhur-Khim., No 15, 1958, 49793.

Author : Satava, Vladimir; Korbl, Jiri.
Inst :
Title : Analytical Use of Silver Permanganate. VII. Thermal Decomposition of Silver Permanganate.

Orig Pub: Chem. listy, 1957, 51, No 1, 27-35; Sb. chekhosl. khim. rabot, 1957, 22, No 5, 1380-1389.

Abstract: Study of chemical and physical processes of thermal decomposition of $AgMnO_4$. At first the decomposition of $AgMnO_4$ takes place analogously to the decomposition of other permanganates; in the course thereof the anion MnO_4^- undergoes reduction mostly to $Mn_2O_5^{2-}$; however, the course of the reaction is affected by a number of factors (nature and the duration of

Card : 1/3

Res Inst Pharm. & Biochem.

E-1

CZECHOSLOVAKIA/Analytical Chemistry. General Questions.

Abs Jour:Ref Zhur-Khim., No 13, 1958, 42989.

Author : I. Korbl Jiri, Pribil Rudolf
II. Korbl Jiri, Kraus Eduard, Jancik Fedir, Pribil Rudolf.

Title : Metallochromatic Indicators. I. Preliminary Communication. II. 3,4-Dihydroxy-4'-Nitroazobenzene and 3,4-Dihydroxy-Azobenzene-4'-Sulfonic Acid as Simple Metallochromatic Prototypes of Pyrocatechol Violet.

Orig Pub: Chem. listy, 1957, 51, No 2, 302-310; 311-314; Sb. chekhosl. khim. rabot, 1957, 22, No 4, 1122-1130.

Abstract: I. Indicators used in complexometry can be subdivided into 3 groups: 1) Colorless compounds which produce a characteristic color with definite cathions, the chromophore being in this

Card : 1/5

11

CZECHOSLOVAKIA/Analytical Chemistry. General Questions.

Abs Jour: Ref Zhur-Khim., No 13, 1958, 42989.

case the deformed cathion (salicylic and sulfo-salicylic acid, tyrone, NH_4SCN, KI, thiourea); 2) Substances which produce with certain cathions a turbidity or strongly colored adsorption products (oxalic acid, gallocyanianin); 3) Organic dyestuffs capable of forming complexes with a sharp change in color (murexide, Eriochrome Black T, Pyrocatechol Violet (I), Pyrogallol Red, Xylenol Orange, etc.). Substances of the last mentioned group must be regarded as complexometric indicators in the direct meaning of the term; they are being designated as "metallochromatic indicators" (MI). All MI have the properties of acid-base indicators and also include complex-forming groups which are a part of

Card : 2/5

12

the effect of the other substituents. The properties of suitable MI are determined from this standpoint. II. By coupling of diazotized p-nitraniline or sulfanilic acid were prepared 3,4-dihydroxy-4'-nitro-azobenzene (II) and the Na-salt of 3,4-dihydroxy-azobenzene-4'-sulfonic acid (III), which are the simplest forms of MI of I type. MI II and III can be utilized for complexometric determination of the same cathions which are determined with I. All 3 indicators have the same complex-forming groups, as a result of which they differ from one another only in range and pH interval of color changes on formation of complexes with the cathions. On determination of Bi with III better results were obtained than with I. The

Korbl J, R.

E-2

CZECHOSLOVAKIA/Analytical Chemistry - Analysis of Inorganic Substances.

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24756

Author : Korbl Jiri, Pribil Rudolf

Inst : -

Title : Complexometric Titration (Chelatometry). XXIX. Selective Masking and Determination of Mercury.

Orig Pub : Chem. listy. 1957, 51, No 4, 667-671; Sb. chekhosl. khim. rabot, 1957, 22, No 6, 1771-1776

Abstract : Thiosemicarbazide (I) is used as a new selective reagent for the masking of Hg^{2+}. In an acidic medium I forms with Hg^{2+} a white rapidly darkening precipitate which dissolves in an excess of I to form a colorless solution in which Hg is combined with I as a very stable complex. In an alkaline solution this complex is decomposed with separation of HgS. Ag^{+}, Cu^{2+} and Fe^{3+} also react with I; other cathions either do not react with I, or form

Card 1/3

17

Korbl, Jiri

CZECHOSLOVAKIA/Analytic Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour : Ref Zhur - Khimiya, No 10, 1958, 32159

Author : Jiri Korbl, Rudolf Pribil

Inst :

Title : Complexometric Titration (Chelatometry). XXV. Methylthymol Blue - New Metal-Chrome Indicator of Complexone Type.

Orig Pub : Chem. listy, 1957, 51, No 6, 1061-1067

Abstract : 3,3'-bis-N,N-di(carboxylmethyl)aminomethylthymolsulfophthalein (I) called "methylthymol blue" by the authors is proposed as a new metal-chrome indicator. The Na salt of I dissolves easily in water producing a stable enough solution; it does not dissolve in C_2H_5OH. Being acid-basic, the indicator I has 4 pH ranges of color transitions: pH less than 0 (red - yellow), pH between 6.5 and 8.5 (yellow - light blue), pH between 10.7 and 11.5

Card 1/3

23

E-1

CZECHOSLOVAKIA / Analytical Chemistry. General.

Abs Jour : Ref Zhur - Khim., No 15, 1958, No 49940

Author : Korbl, Jiri.
Inst : Not given
Title : Metallochromic Indicators. III. Preparation of 3,3'-bis-N,N-di(carboxymethyl)aminomethylthymolsulfonophthalein (Methylthymol Blue).

Orig Pub : Chem. listy, 1957, 51, No. 7, 1304 - 1306; Sb. chekhosl. khim. rabot, 1957, 22, No. 6, 1789-1792.

Abstract : The preparation of 3,3'-bis-N,N-di(carboxymethyl)-amino-methylthymolsulfonophthalein (Methylthymol Blue) (I) or of its Na_4 salt used as a metallochromic indicator is described. Eight g of Na salt of iminodiacetic acid is heated with 50 ml. of glacial CH_3COOH until it dissolves, the solution is cooled, and 9.3 g. of thymolsulfonophthalein and 4 ml. of 37% aqueous solution of CH O [sic] are added to

Card 1/3

Korbl, Jiri

E-2

CZECHOSLOVAKIA/Analytic Chemistry - Analysis of Inorganic Substances.

Abs Jour : Ref Zhur - Khimiya, No 10, 1958, 32161

Author : Frantisek Buben, Jiri Korbl, Rudolf Pribil

Inst : -

Title : Complexometric Titration (Chelatometry). XXXI. Analysis of Calcium-Disodium Salt of Ethylenediaminetetraacetic Acid.

Orig Pub : Chem. listy, 1957, 51, No 7, 1307-1311

Abstract : A rapid complexometric method of determination of free and total Ca and complexone III (I) in the Ca-Na_2 salt of ethylenediaminetetraacetic acid (II) and pharmaceutical preparations was developed. The application of methylthymol blue (III) as an indicator in acid and alkaline media permits to determine all the components using one weighed sample. The sample to be analysed and containing 200 to 300 g of II is dissolved in 100 ml it

Card 1/3

KORBL, JIRI

Metallochromic indicators. [illegible] and properties of "Calcein" [illegible]
Chem. Biochem. Kolloidy, 1957, [illegible]
and Ellingboe (*C.A.* 50, 9212a; Calcein [illegible]
fluorescein by condensation with [illegible] and [illegible]
[illegible] by a modification
changes in the reaction [illegible]
ing changes in fluorescence which enable [illegible]
enediaminetetraacetic acid titrations of Ca, Sr and Ba
even in intensely colored solutions. The Cu, Ni(II), Zn, Co
and Co ions can be [illegible]
[illegible] Mn with [illegible]
[illegible] in [illegible]
[illegible] on addition of [illegible]
Mg only as long as [illegible]
the green fluorescence
[illegible] discriminate [illegible]
with a sensitivity [illegible]

KORBL, J.

CZECHOSLOVAKIA / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60556.

Author : V - Jiri Korbl, Bohumil Kakac; VI - Jiri Korbl, Rudolf Pribil; VII - Jiri Korbl, Eduard Kraus, Rudolf Pribil.

Inst : -

Title : Metallochromic Indicators. V. Properties of Methylthymol Blue as of Acid-Base Indicator. VI. Analogues of o-Cresolphthalein Complexon. VII Glycinethymol Blue.

Orig Pub: Chem. listy, 1957, 51, No 9, 1680-1685; No 10, 1804-1808; 1809-1813.

Abstract: The behavior of methylthymol blue (I, 3,3'-bis-N,

Card 1/11

CZECHOSLOVAKIA / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60556.

Abstract: valent of NaOH. It may be assumed from the shape of the titration curve that the values of pK_1 to pK_3 of I under 4.5 are close one to another; the corresponding proton detachment of I proceeds without any color change. The magnitude of pK_4 may be assumed to be 7.3. The light absorption curves of 8 . 10^{-5} M solution of I at various pH-s within the range from 5 to 14 are crossing at isobestic points in the majority of cases and depending on the light wave length, which indicates simple equilibria of the corresponding I ions. The values of pK_4 = 7.2, pK_5 = 11.15 and pK_6 = 13.4 were obtained from the course of the extinction curve of a 8 .

Card 3/11

Card 4/11

CZECHOSLOVAKIA / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60556.

Abstract: ties of 3,3'-bis-N,N-di-(carboxymethyl)-aminomethyl derivatives of phenolphthalein (phenolphthalein complexon, III) and thymolphthalein (thymolphthalein complexon, IV) were studied and a comparison with the analogous derivative of o-cresol-phthalein (o-cresolphthalein complexon, V was carried out). Schwarzenbach and his doworkers proposed V as an indicator for complexometric determination of alkali-earth metals. The regions of color changes of III, IV and V depending on pH coincide with the regions of corresponding initial acid-base indicators according to spectrophotometric measurements. But the weak coloration of III, IV and V appears

Card 5/11

CZECHOSLOVAKIA / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60556.

Abstract: already at pH = 7 to 8; it becomes more intensive with the rise of pH in consequence of the formation of colored ions. The color intensity of individual forms depends on the fact, whether a symmetrical, or an asymmetrical resonance system is being produced, at which occasion it is necessary to take into consideration the hydrogen bridges between the phenol O-s and N atoms. The alkaline form of III is purple, that of IV is blue, and that of V is violet. A qualitative color change from blue into reddish-gray is observed in IV near pH = 12. The color of III becomes weaker at pH = = 13 to 14 analogously to the initial indicator. The least and, consequently, the most favorable intensity rise of the coloration proper together with pH is observed at IV. III, IV and V possess

Card 6/11

CZECHOSLOVAKIA / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60556

Abstract: the metallochromic properties only in an alkaline medium contrarily to analogous derivatives of sulfo phthaleins. I with Ca^{2+}, Sr^{2+}, and Ba^{2+} produces colored reactions. Many other cathions cause blocking of III connected with its discoloration; a blocked III does not react with cathions, with which it would produce a positive reaction otherwise. IV and V behave similarly, but cases of their blocking occur more seldom. The positive color reaction of III, IV and V with Ca^{2+} are still clear enough at pH = 9, but with Sr^{2+} and, first of all, with Ba^{2+} they are already expressionless. To the contrary, the intensity of III coloration

Card 7/11

of a N-carboxymethyl group from 1-oxy-2-N,N-di-(carboxymethyl)-aminomethylaryl complex producing

CZECHOSLOVAKIA / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60556.

Abstract: groupation in combination with II. Its preparation by the condensation of II with formaldehide and glycine is similar to the preparation of I. The Na salt of VI is a dark brown powder easily soluble in water. The first acid-base transition of VI from a yellow coloration into a red one is shifted to the range of lower pH magnitudes as compared with II (pH = 2.8 to 1.2). The second transition of VI color (yellow - blue) takes place approximately in the same range of pH as in case of I; the intensity decrease of the blue coloration is not clear enough at high values of pH in the case of VI. The complex formation properties of

Card 9/11

CZECHOSLOVAKIA / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60556.

Abstract: VI are lower as compared with I or other similar indicators (Ni^{2+}, Fe^{3+} and Pd^{2+} produce complexes). Starting from pH = 3. VI produces complexes of dark blue color with numerous cathions at various pH magnitudes. At the titration with ethylendinitrilotetraacetic acid (VII) solution, the color transitions are clear in the case of Cu^{2+}, Zn^{2+}, Pb^{2+} and Hg^{2+}, and they are lengthy in the case of Pd^{2+}, Ni^{2+}, Co^{2+} and Fe^{3+}. The application of VI is practically important first of all for the direct complexonometric determination of Cu^{2+} in an acid medium; VI is suitable for that purpose more than 1-(2-pyridylazo)-2-naphthol or variamine blue B first of all because the Cu complex is well soluble and due to the clear change of color. Method of work: a corresponding volume of 0.05 M

Card 10/11

KORBL, J.

Distr: 4E3d

Analytical applications of silver permanganate. VIII. Micro- and semimicrodetermination of carbon and hydrogen in organic compounds containing fluorine. Jiří Horáček and Jiří Körbl (Československá akad. věd, Prague). *Chem. listy* 51, 2132–8 (1957). cf. *C.A.* 51, 11913k.—Micro- and semimicrodetn. of C and H in compds. contg. F is carried out by combustion of the samples on a layer of a decompn. product of $AgMnO_4$ and absorption of HF and SiF_4 on a layer of Pb_3O_4 on pumice. The combustion tube for micro (semimicro) detn. of outer diam. of 10 mm., length, 30 (35) cm. is filled as follows: 2 cm. Ag wool, 3.5(6) cm., Pb_3O_4 (prepd. by mixing Pb_3O_4 with pumice 5:1, [0.5–1 mm. grain], adding water to let the oxide stick to the pumice, and shaking), a small layer of ignited asbestos, 4(8) cm. of the decompn. product of $AgMnO_4$ (heated 2 hrs. at 550°), and a layer of asbestos. Heat the filling to 650° in an elec. furnace of 10(15) cm. length. The combustion lasts 6–7 (10–16) min. CO_2 and H_2O are absorbed according to Pregl. Errors are up to 0.3%. M. Hudlický

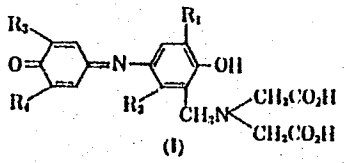
7

Complexometric titrations (chelatometry). XXXV Indirect determination of aluminum with Xylenol Orange. Miloslav Houda, Jiří Kořal, Vladimír [illegible] PHid (Czech. Acad. Sc. Prague [illegible] (1967); cf. C.A. 52, 2082a [illegible] the di-Na salt of ethylenediaminetetraacetic acid (I) with an adequate velocity in slightly acid solns. (pH 3). At higher pH values, or in the presence of great amts. of neutral salts of high ionic strength [illegible] much slower, but can be [illegible] the excess of I can be [illegible] NO_3 at pH 5–5.5 in acetate buffer [illegible] preferably with [illegible] [illegible] means of solid urotropine. L. J. Urbanek

J. Körbl

Distr: AE2c(j)

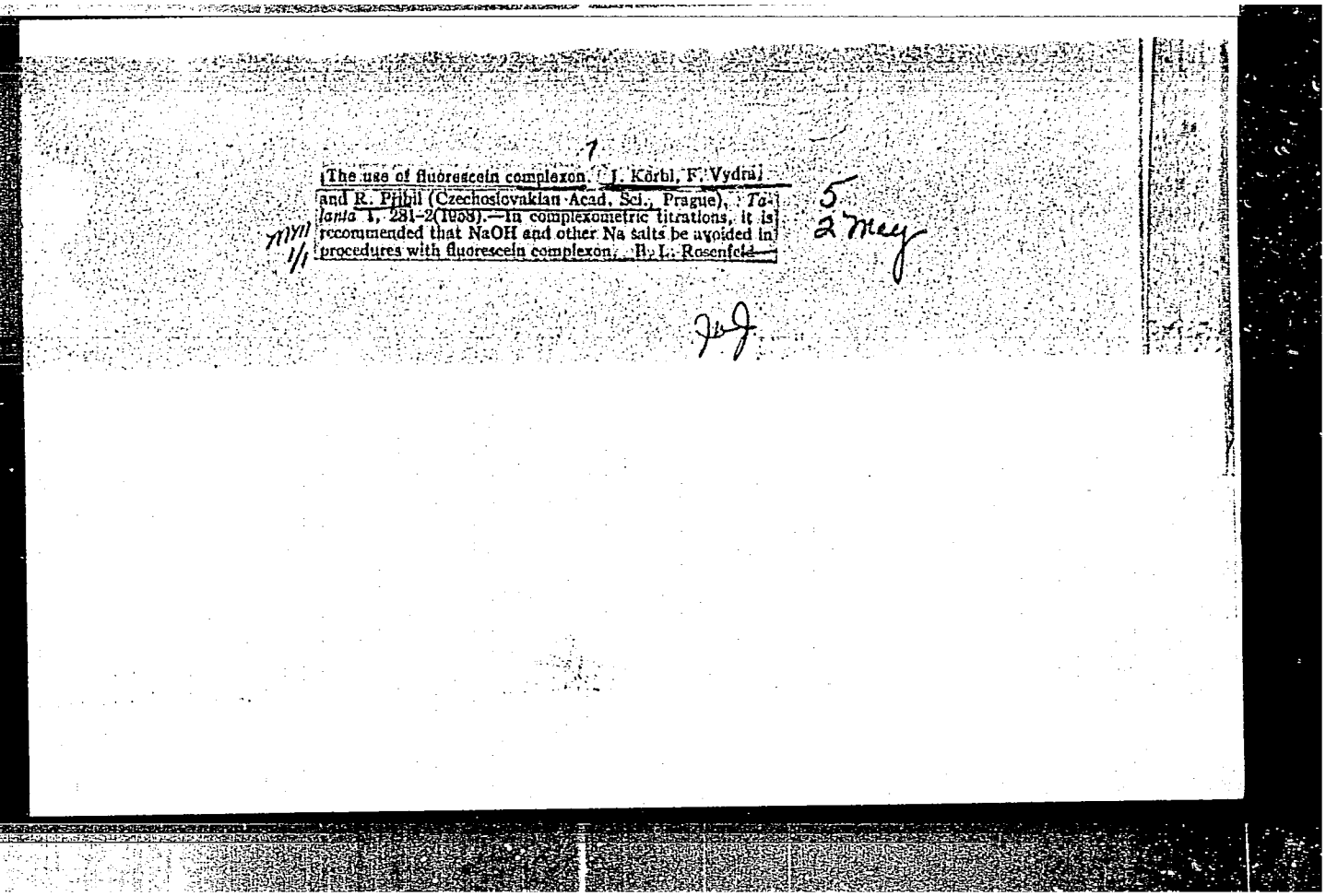
Indophenol complexons: a new group of metallochromic indicators. J. Körbl and V. Svoboda (Pharm. Biochem. Research Inst., Prague). *Chem. & Ind.* (London) 1958, 1233–4.—Green to black Na salts of indophenol complexons (I) have been synthesized by (1) treatment of *o*-[bis(carboxymethyl)aminomethyl]phenols with 2,6-dihalo-*p*-benzoquinone chlorimines in alk. soln., or by (2) oxidation of a mixt. of these phenols and 2,6-dihalo-4-aminophenols with a soln. of NaOCl. The I prepd. have the following structures:



(I)

$R_1 = R_3 = H$, $R_2 = R_4 = Cl$ (I); $R_1 = R_3 = H$, $R_2 = R_4 = Br$ (II); $R_1 = CH_3$, $R_2 = H$, $R_3 = Br$; $R_1 = R_3 = CH_3$, $R_2 = R_4 = Cl$; $R_1 = R_3 = CH_3$, $R_2 = R_4 = Br$; $R_1 = CH_3$, $R_2 = CH_3$, $R_3 = R_4 = Cl$; $R_1 = CH_3$, $R_2 = CH_3$, $R_3 = R_4 = Br$; $R_1 = OCH_3$, $R_2 = H$, $R_3 = R_4 = Cl$; $R_1 = OCH_3$, $R_2 = H$, $R_3 = R_4 = Br$; $R_1 = H$, $R_2 = CH_3$, $R_3 = R_4 = Cl$(III); $R_1 = H$, $R_2 = CH_3$, $R_3 = R_4 = Br$. Aq. acid solns. of these compds. are colored orange to red; this color changes to an intense blue at pH 4–6. At pH 3.5 all of the above form violet to blue complexes with ions such as Zr^{4+}, Bi^{+++}, Th^{++}, Sc^{+++}, Fe^{+++}, and Al^{+++}. I, II, and III of the above compds. also form complexes with Ni^{++}, Cu^{++}, and Zn^{++}. Titration of solns. of such complexes with EDTA indicates that those of Th, Bi, Sc, Cu, and Zn react immediately, while those of Fe, Zr, Ni, and Al react more slowly. J. J. Lehby

5
2-May



1

The use of fluorescein complexon. J. Körbl, F. Vydra and R. Přibil (Czechoslovakian Acad. Sci., Prague), *Talanta* 1, 281-2(1958).—In complexometric titrations, it is recommended that NaOH and other Na salts be avoided in procedures with fluorescein complexon. B. L. Rosenfeld

5
2 May

KORBL, J.

Progress in complexometry in Czechoslovakia. In German. p. 395.

CHEMIA ANALITYCZNA. (Komisja Analityczana Polaskiej Akademii Nauk i Naczelan Organizacja Techniczna) Warszawa, Poland, Vol. 3, no. 3/4 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959 Uncl.

Korbl, J.

Country : CZECHOSLOVAKIA H-17
Category : Chemical Technology. Pharmaceuticals. Vitamins. Antibiotics
Abs. Jour : Ref Zhur-Khimiya, No 14, 1959, No 50715

Author : Buben, F.; Korbl, J.
Institute : -
Title : Complexometric Titration Employed in Pharmaceutical Analyses. XVII. Determination of Bismuth
Orig Pub. : Ceskosl. farmac., 1958, 7, No 2, 78-79

Abstract : Developed is the direct complexometric method for quantitative determination of Bi in pharmaceutical preparations. It is based on the titration of Bi ions at a pH of approx. 1.0 with 0.05 M solution of "chelatone-3" and with the use of methylthiomole blue or xylenole orange as indicators. An organic Bi compound has to be converted into an inorganic form by boiling it with a mixture (1:1) of 70% $HClO_4$ and 35% HNO_3. It is proposed to intro-

Card: 1/2

Country : H-17

CZECHOSLOVAKIA/Analytic Chemistry. Analysis of Inorganic Substances. E

Abs Jour: Ref Zhur-Khim., No 23, 77218.

Author : Přibil Rudolf, Körbl, Jiří; Kysil, Bohdan, Vobora, Jiří.

Inst :

Title : Complexometric Titration (Chelatometry). XXXVI. To Sequestering of Iron by Triethanolamine. Calcium Determination Using Thymolphthalein Chelate as Indicator.

Orig Pub: Chem. listy, 1958, 52, No 2, 243-246.

Abstract: A rapid method of complexometric determination of Ca in the presence of great amounts of Fe^{3+} after it has been sequestered by triethanolamine (I) is described. Should ethylenedinitrylotetraacetic

Card : 1/3

CZECHOSLOVAKIA/Analytic Chemistry. Analysis of Inorganic Substances. E

Abs Jour: Ref Zhur-Khim., No 23, 77218.

acid (II) solution be previously added to an iron containing solution to be analyzed in the amount equivalent to about 1/3 of the content of iron, colorless solutions would be obtained after the addition of I and alkalization, which facilitate the precise titration of Ca even if the Fe concentrations were high. Thymolphthalein chelate (III) is a suitable indicator. For the determination of Ca, an excess (12 to 25 ml) of 0.05 M II solution and 5 ml of I solution (1 : 2) are added to 50 ml or less of weakly acid solution to be analyzed containing 2 to 40 mg of Ca and up to 84 mg of Fe. The prepared brown colored solution is alkalized with 1 n. NaOH solution (up to 10 ml)

Card : 2/4

E

Country : CZECHOSLOVAKIA
Category : Analytical Chemistry. General Problems

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15038

Author : Korbl, J.; Pribil, R.
Institut. :
Title : Complexometric Titration (Cholatometry). XXXVIII. On the Sensitivity of Indicators and Titration Errors in Complexometry
Orig Pub. : Chem. listy, 1958, 52, No 4, 601-610

Abstract : Several mathematical formulae were derived for the purpose of evaluating the sensitivity and accuracy of complexometric titration. The processes which take place during complexometric titrations are similar to processes which occur during acid-base titrations: in complexometry the complex of metals (M) corresponds to the water which forms as a result of the neutralization reaction. The anions of weak acids and cations of weak bases play the same role

Card: 1/10

Country : CZECHOSLOVAKIA E
Category : Analytical Chemistry. General Problems.

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15038

Author :
Institut. :
Title :

Orig Pub. :

Abstract Cont'd : the M which can be expressed through the concentration of M at the apparent point of equivalence which had not reacted with the titrant. The titration error in complexometry, or its indicator according to Flashka, $p = C_Y/C_M$ (C_Y and C_M are, respectively, the total concentrations of the reagent and M at the apparent point of equivalence), can be mathematically expressed as a function of sensitivity of the indicator U, value of C_M, apparent constant of the formation of K/α_H, as well as of

Card: 3/10

Category : Analytical Chemistry. General Problems

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15038

Institut. :
Title :

Orig Pub. :

Abstract Cont'd : titration error is expressed by the formula: $p = 1 - (U/C_M) + (\alpha_H/UK)$, where K is the true constant of formation. In the case of a zero titration error, $p = 1$, and consequently, U (opt.) $= \sqrt{C_M \alpha_H / K}$. According to its dependence on C_M, U (opt.) differs from the analogous value of acid-base indicators. During titration of the cation M_1, in the presence of cations M_2, M_3 ... M_i, which also partially reacts with

Card: 6/10

E

Country : CZECHOSLOVAKIA
Category : Analytical Chemistry. General Problems

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15038

Author :
Institut. :
Title :

Orig Pub. :

Abstract : the titrant, the following equations are valid:
Cont'd

$$P_1 = 1 - (U/C_{M_1}) + (\alpha_H/UK_1) + (1/UK_1)\sum_2^i K_i C_M$$

and U (opt.) $= \sqrt{(\alpha_H + \sum_{i=2}^{n} K_i C_{M_i})C_{M_1}/K_1}$. The extraneous cations do not interfere if $\alpha_H > 10\sum_2^i K_i C_{M_i}$. However, these relationships do not always coincide with experimental data inasmuch as the kinetics of the reactions were

7/10

Card:

E

Country : CZECHOSLOVAKIA
Category : Analytical Chemistry. General Problems

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15038

Author :
Institut. :
Title :

Orig Pub. :

Abstract Cont'd : not considered. In the case of titration of cation M in the presence of the interference of complex-forming anion Z, which reacts with M in a ratio of 1:1, the following expression is obtained: $p_2 = 1 - (U/C_M) + (\alpha_{1H}/UK_1) - (K_1UC_Z/\alpha_{2H}C_M) = p - (K_2UC_Z/\alpha_{2H}C_M)$, from which it follows that: $U(\text{opt.}) = \sqrt{\alpha_{1H}C_M/K_1(1+K_2C_Z/\alpha_{2H})}$. The influence of Z can be neglected if $1 \geq$

Card: 8/10

E - 4

Country : CZECHOSLOVAKIA
Category : Analytical Chemistry. General Problems. I

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15038

Author :
Institut. :
Title :

Orig Pub. :

Abstract Cont'd : $10K_2C_Z/\alpha_{2H}$. Analogous results are also valid for other reaction ratios between M and Z. The influence of CI itself as the complex-forming reagent in two-color CI cannot be taken into consideration if work is conducted in the area of CI concentrations where U does not depend on C_{CI}; however, this does not occur in the case of unicolored CI. Titration errors in separate cases can also be found on the basis of a nomogram constructed by means of the ratios

Card: 9/10

E

Country : CZECHOSLOVAKIA
Category : Analytical Chemistry. General Problems

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15038

Author :
Institut. :
Title :

Orig Pub. :

Abstract Cont'd : quoted above. The value of U has a decisive influence on the value of the titration error. Errors caused by the influence of other cations can, within certain limits, be compensated for by the use of a less sensitive CI, and errors caused by a competing complex-forming reagent, on the contrary, can be eliminated by the use of a more sensitive CI. Report XXXVII, see Ref Zhur-Khim, 1958, 77189.-- K. Kamen

Card: 10/10

E - 5

E-3

COUNTRY : Czechoslovakia
CATEGORY : Analytical Chemistry - Analysis of Organic Substances.
ABS. JOUR. : RZKhim., No.7 1959, No. 23120

AUTHOR : Knizakova, E.; Korbl, J.
INST. :
TITLE : Analytical Use of Silver Permanganate. IX. "Isothermal" Product of Silver Permanganate Decomposition as Combustion Catalyst in *

ORIG. PUB. : Chem. listy, 1958, 52, No 4, 750-751

ABSTRACT : An improvement of the procedure of preparation of the product of thermal decomposition of $AgMnO_4$, used as catalyst in elementary analysis of organic substances (RZhKhim, 1956, 47244). The catalyst obtained by the new procedure does not sinter in the combustion tube. $AgMnO_4$ is prepared as previously described, of average crystal size 1 x 1 x 3 mm, and is heated in a layer $\leq$ 2-3 mm for 24 hours in a drying oven at 90-95°, after which it is calcined for 1-3 hours at 500°. Under these conditions the catalyst retains the shape and dimensions of $AgMnO_4$ crystals, and its permeability lasts for a long time. Such a catalyst has yielded good results in semi-micro-determinations of C and

CARD: 1/2

KORBL, J.; HORACEK, J.

"Analytic application of silver permanganate." VIII. Micro- and semimicro determination of carbon and hydrogen in organic compounds containing fluorine. In German. p. 286.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech., Vol. 24, No. 1, Jan 1959.

Monthly List Of East European Accessions (EEAI), LC. Vol. 8, No. 6, Sept. 59 Unclassified

KORBL, J.

Distr: 4E3d

Bromometric determinations of related hydrazine derivatives. F. Jančík, O. Činková, and J. Körbl. *Collection Czechoslov. Chem. Communs.* 24, 2605–8 (1959) (in German).—The dependence of soln. acidity on the results obtained for the direct bromometric titration, utilizing a potentiometric end-point of hydrazine (I), phenylhydrazine (II), semicarbazide (III), oxalic acid dihydrazide (IV), isonicotinic acid hydrazide (V), and cyanoacetic acid hydrazide (VI), has been studied. I, IV, and V were dissolved in 50 ml. 3–4*N* HCl, II, III in 50 ml. 1*N* HCl, 1 g. KBr added, and the soln. titrated potentiometrically. Standard deviation for 4–30 mg. I was ± 0.18%; for 5–73 mg. II, ±0.46%; for 4–57 mg. III, ± 0.17%; for 2–31 mg. IV, ±0.20%; and for 4–62 mg. V, ±0.21%. VI was dissolved in a glass-stoppered Erlenmeyer contg. 50 ml. 1*N* HCl, 1 g. KBr added, and the soln. titrated with 0.1*N* $KBrO_3$ with rapid shaking. After the appearance of the 1st yellow color, 1 g. of KI was added, and the soln. allowed to stand for 5 min. in the dark. The liberated I was titrated with 0.1*N* $Na_2S_2O_3$ to a starch end point. With 4–60 mg. VI, the standard deviation was ±0.18%.

W. W. Sabol

BUDESINSKY, B.; KORBL, J.

Complexometry in orgnic analysis. VII. Determination of organic bases by means of a cadmium EDTA complex. Coll Cz Chem 25 no.1: 76-85 Ja '6C. (EEAI 9:12)

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.
(Complex compounds) (Organic compounds)
(Cadium) (Ethylenedinitrilotetraacetic acid)

REHAK, B.; KOREL, J.

Metallochrome indicators. VIII. Physicochemical examination of xylenol orange and some of its chelates. I. Dissociation constants of xylenol orange. Coll Cz chem 25 no.3:797-810 Mr '60. (EEAI 9:12)

1. Metallurgisches Institut, Tschechoslowakische Akademie der Wissenschaften und Forschungsinstitut fur Pharmazie und Biochemie, Prag.

(Indicators and test papers)
(Xylenol orange)
(Chelatometry)
(Metals)

SVOBODA, V.; DORAZIL, L.; KORBL, J.

Metallochrome indicators. IX. Indophenol complexon. Coll Cz Chem 25 no.4:1037-1043 Ap '60. (EEAI 9:12)

1. Spolana, Neratovice, Forschungsabteilung des Werkes, Lachema, Brno und Forschungsinstitut fur Pharmazie und Biochemie, Prag.
(Indicators and test papers) (Indophenol)
(Complexona) (Metals)

JANCIK, F.; KORBL, J.

Determination of 3-amino-6-alkylsulfoxypyridazines and their sulfonamide derivatives. Cesk. farm. 11 no.6:305-308 Jl '62.

1. Vyzkumny ustav pro farmacii a biochemii, Praha.
(SULFONAMIDES chem) (HETEROCYCLIC COMPOUNDS - chemistry)

HORACEK, J.; PECHANEC, V.; KORBL, J.

Determining carbon and hydrogen in organic compounds. Part 3: Efficiency of combustion catalysts in combustion of monoxide of carbon, n-heptane, and benzol. Coll Cz Chem 27 no.5:1254-1260 My '62.

1. Institut fur Chemie and Biochemie, Tschechoslowakische Akademie der Wissenschaften, Prag, und Forschungsinstitut fur Pharmazie und Biochemie, Prag.

JANCIK,F.; KORBL,J.; HODONICKA J.

Determination of 5-ethyl-5- (1-methylbutyl)- thiobarbituric acid and its sodium salt. Cesk. farm. 13 no.2:70-73 F'64.

1. Vyzkumny ustav pro farmacii a biochemii, Praha.

*

CA KORBLER J.

Control of occupational cancer in industry. Juraj Kobler (Inst. Ind. Hyg., Zagreb, Jugoslavia). *Arhiv Hig. Rada* 1, 310-15(1950)(English summary).—K. stresses the growing importance of the study of occupational cancer. The discovery of cancerogenic substances in tar has shown that a large number of cancer cases can be classified as occupational disease. K. has studied the precancerous and cancerous diseases among industrial workers. Incidence of cancer in both soot and metal industry has been examd. Observations are confirmed, showing that workers employed in lead industry seldom suffer from cancer. In industry, cases of cancer were reported where the causative cancerogenic substance could not be detd. Thus cancer of the lower lip occurred among women in connection with spinning, where the thread is passed through the mouth to be moistened by saliva. It seems that the mechanical irritation is not the only cause leading to cancer, but that the material used for spinning contains cancerogenic substances, although no mineral oil was employed. E. J. Froelich

KORBLER, J. (Zagreb)

Historical methods for the treatment of cancer in the popular medicine of Southern Slavs. Bul sc Youg 8 no. 1/2: 18 F-Ap '63.

KORBLER, Juraj, Dr., Zagreb

Treatment of gynecological cancers with radiocobalt. Cesk. gyn. 21 no.3:170 Apr 56.

(COBALT, radioactive,
ther. of cancer of female genitalia. (Cz))
(GENITALIA, FEMALE, neoplasms,
ther., radiocobalt. (Cz))

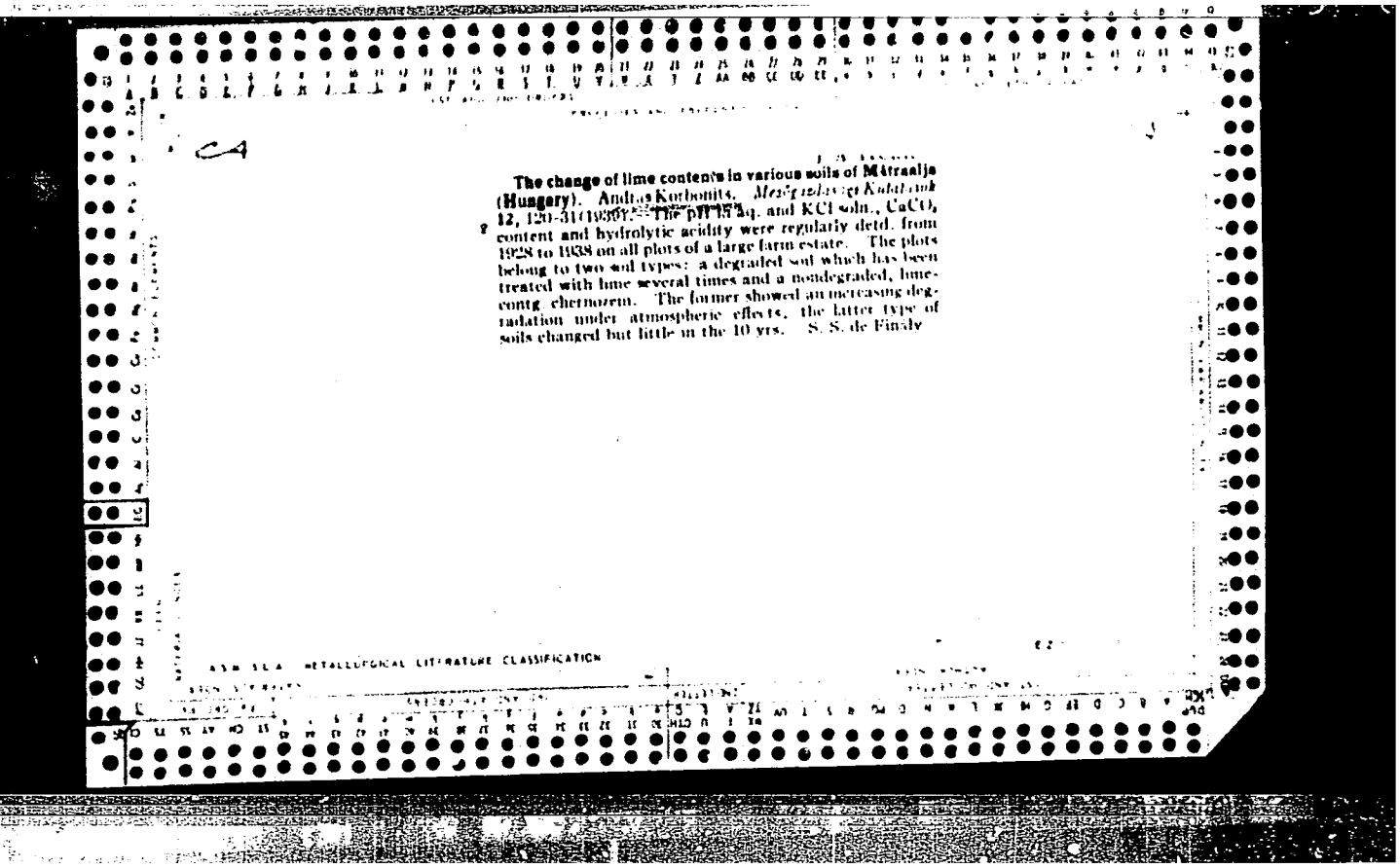
KORBMAN, S.M.

FEL'DSHTEYN, E.I., kandidat tekhnicheskikh nauk; KORBMAN, S.N.; POL'NYAKOVA, F.Ya., inzhener.

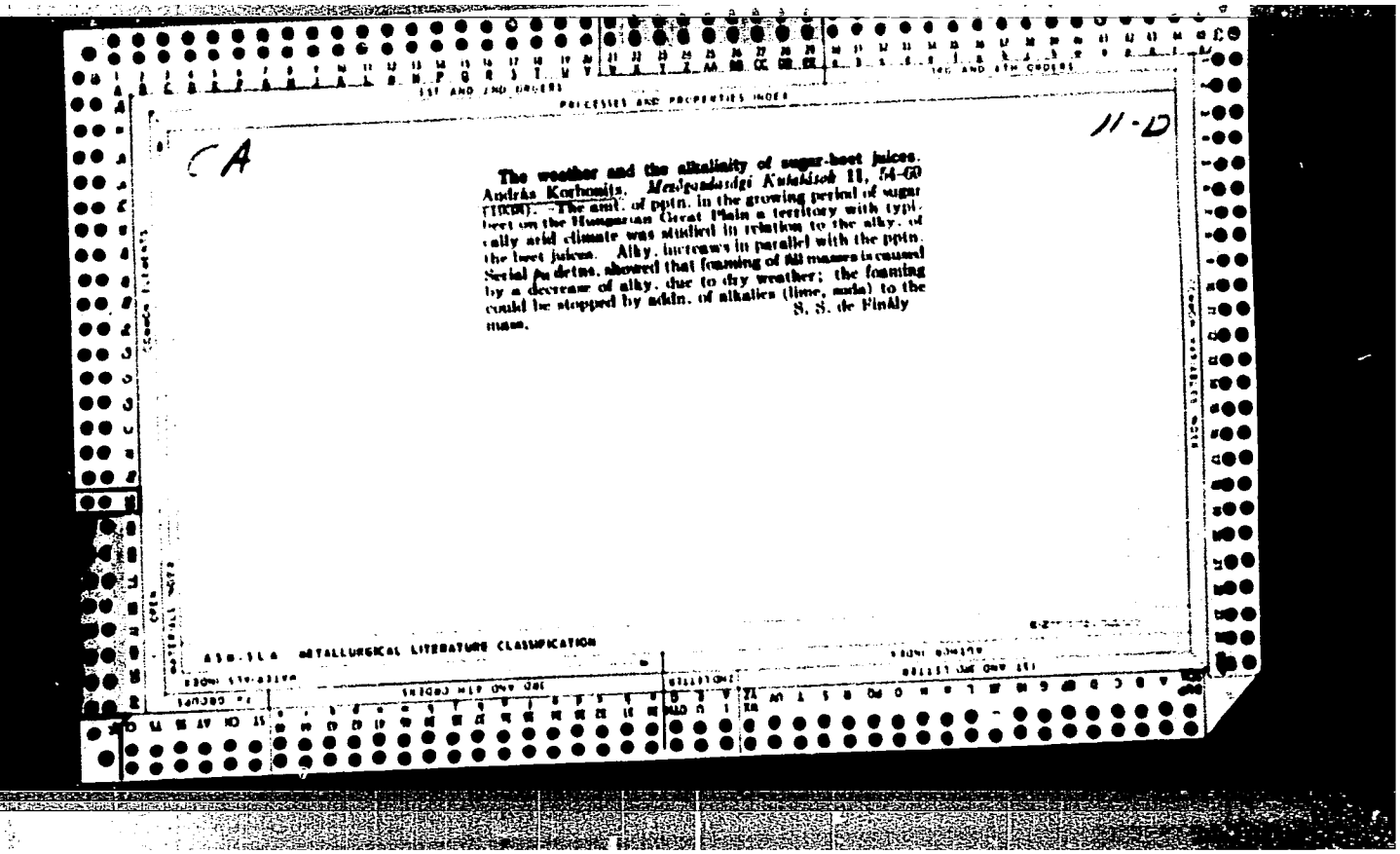
Chromium plating of cutting tools. Stan. i instr. 18 no.4: 24-26 Ap '47. (MLRA 7:11)
(Machine tools) (Chromium plating)

BURTSEV, V.T. (Moskva) KOREMAN, Yu.I. (Moskva); SAMARIN, A.M. (Moskva)

Kinetics of the removal of sulfur compounds during the vacuum treatment of iron-carbon melts. Izv. AN SSSR Met. i gor. delo no.3:58-62 My-Je'64 (MIRA 17:7)



The change of lime content in various soils of Mátrasalja (Hungary). Andras Korbuly. *Mezőgazdasági Kutatások* 12, 120-31(1939).—The pH in aq. and KCl soln., $CaCO_3$ content and hydrolytic acidity were regularly detd. from 1928 to 1938 on all plots of a large farm estate. The plots belong to two soil types: a degraded soil which has been treated with lime several times and a nondegraded, lime-contg. chernozem. The former showed an increasing degradation under atmospheric effects, the latter type of soils changed but little in the 10 yrs. S. S. de Finály



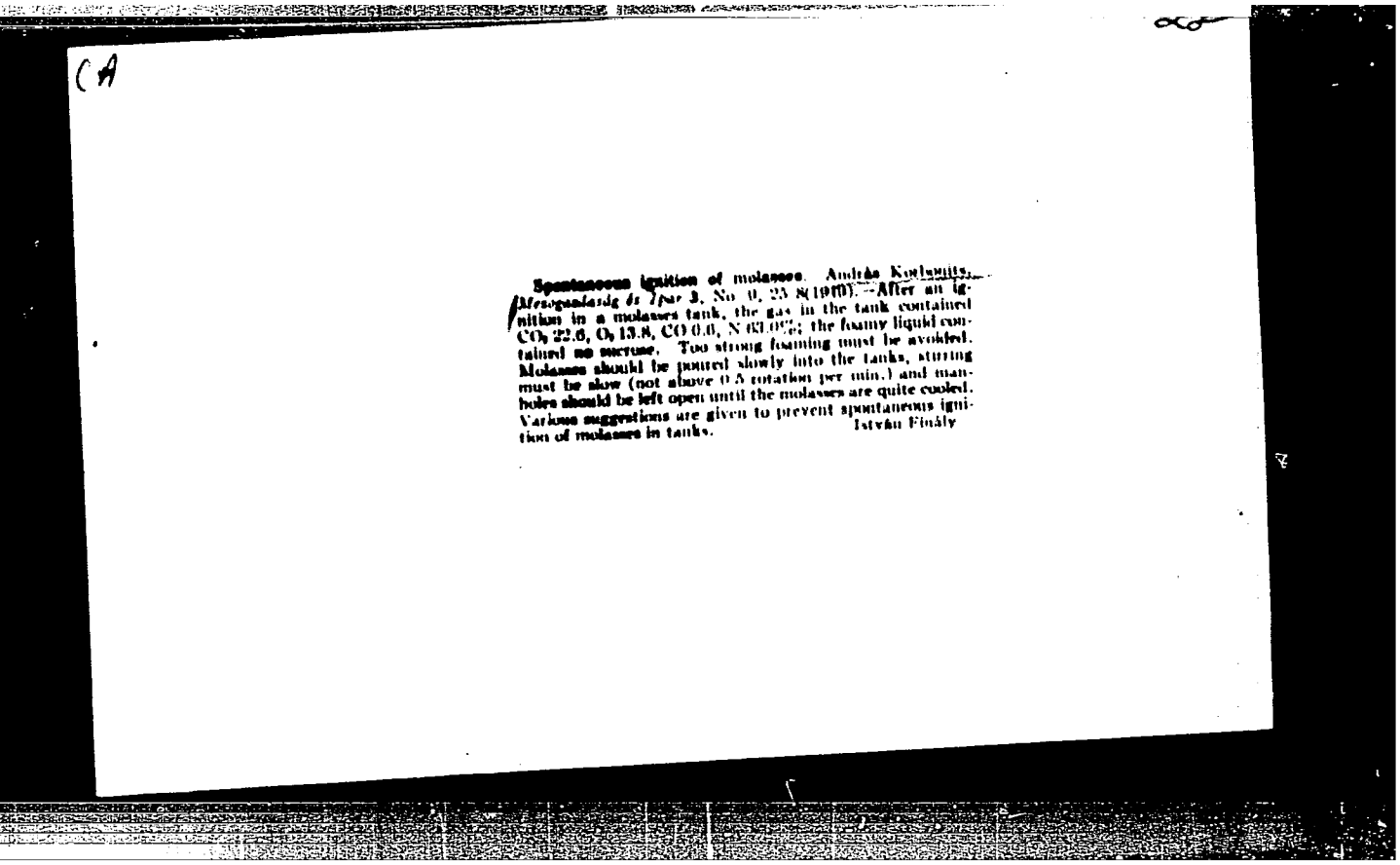
CA

11-D

The weather and the alkalinity of sugar-beet juices. András Kerbosits. *Mezőgazdasági Kutatások* **11**, 54–60 [1938]. — The amt. of pptn. in the growing period of sugar beet on the Hungarian Great Plain a territory with typically arid climate was studied in relation to the alky. of the beet juices. Alky. increases in parallel with the pptn. Serial pptn. determs. showed that foaming of all masses is caused by a decrease of alky. due to dry weather; the foaming could be stopped by addn. of alkalies (lime, soda) to the mass.

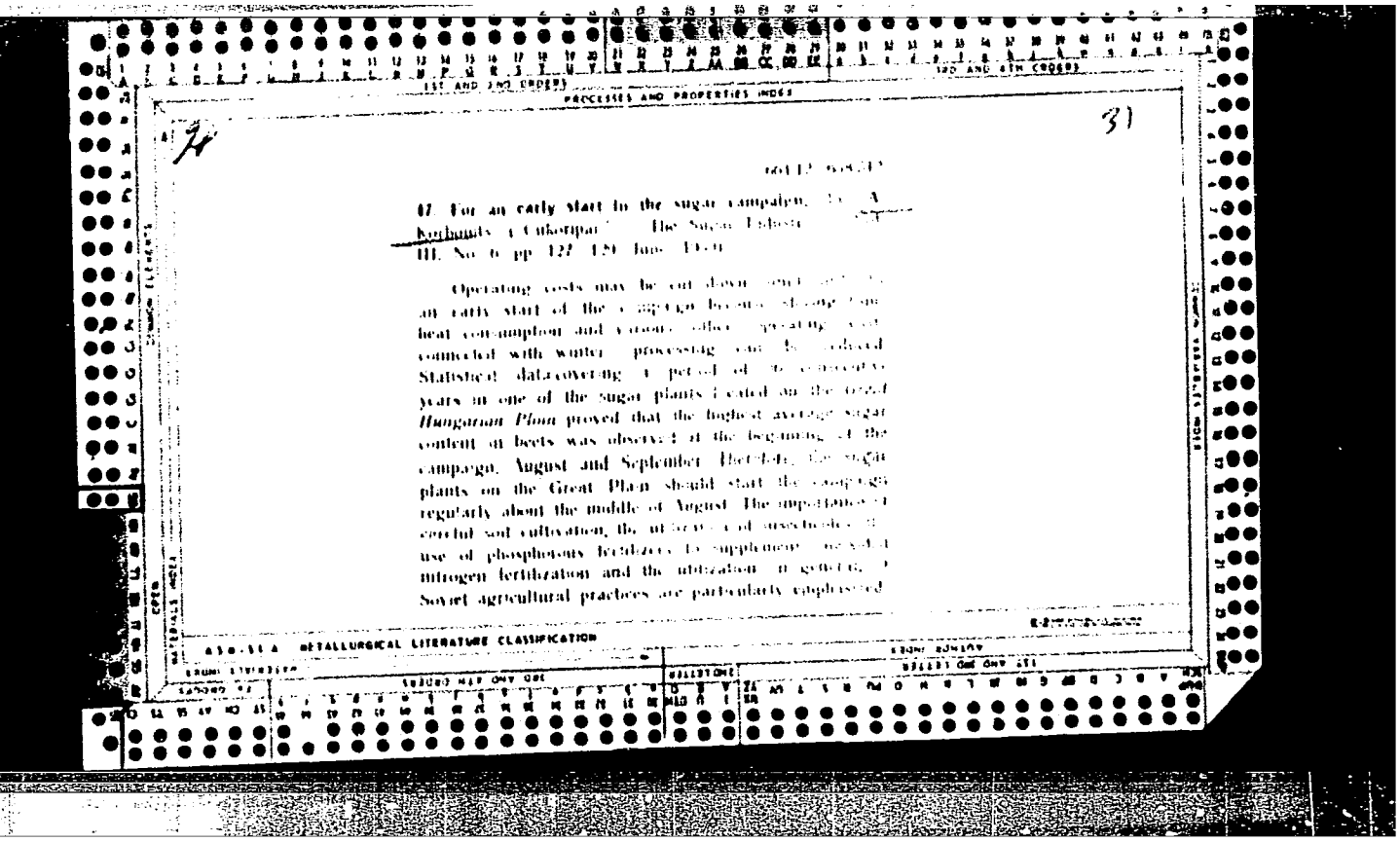
S. S. de Finály

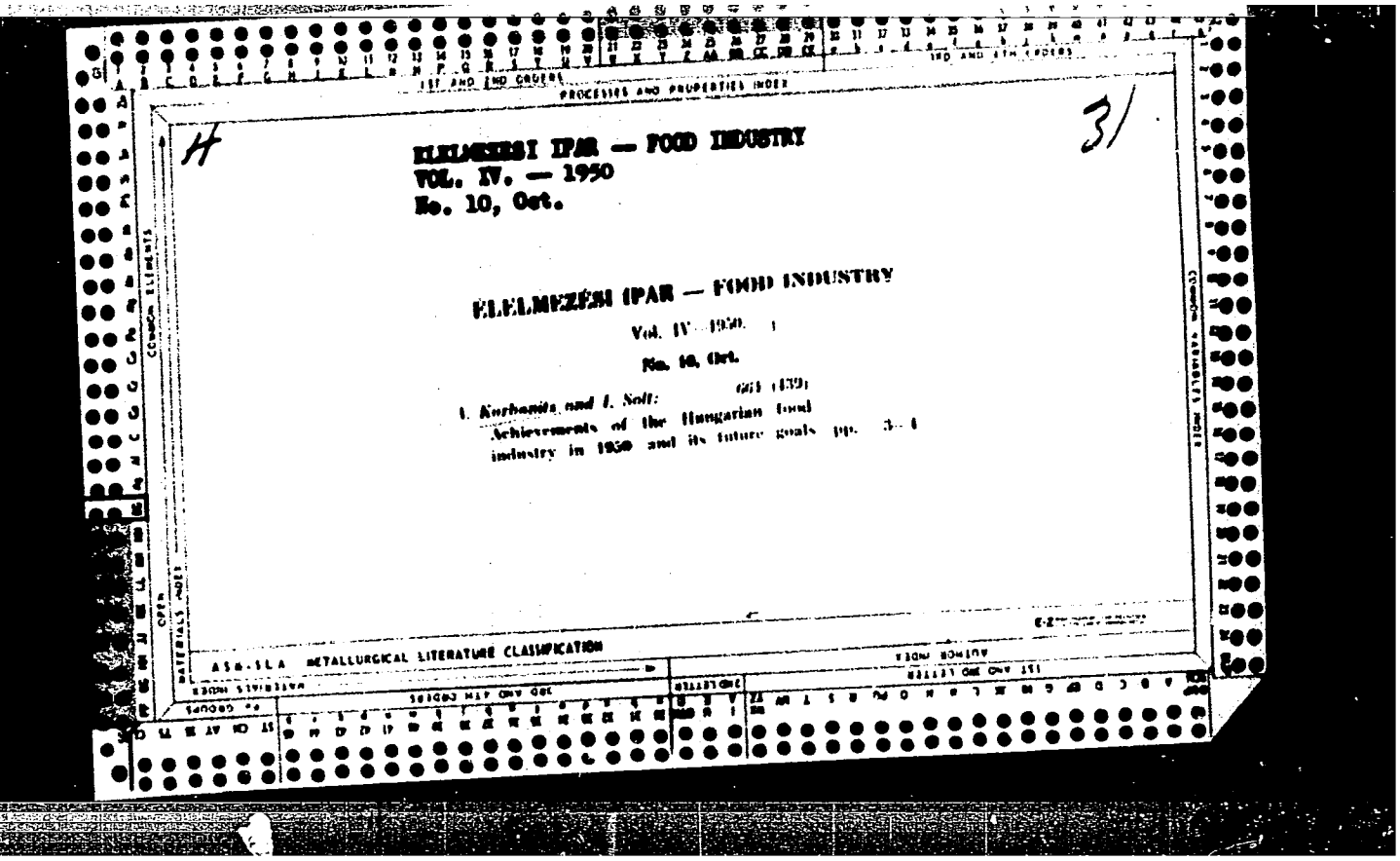
A50-5L6 METALLURGICAL LITERATURE CLASSIFICATION



CA

Spontaneous ignition of molasses. András Kuslavits. *Mezőgazdaság és Ipar* 3, No. 9, 25–8 (1959).—After an ignition in a molasses tank, the gas in the tank contained CO_2 22.6, O_2 13.8, CO 0.0, N 63.6%; the foamy liquid contained no sucrose. Too strong foaming must be avoided. Molasses should be poured slowly into the tanks, stirring must be slow (not above 0.5 rotation per min.) and manholes should be left open until the molasses are quite cooled. Various suggestions are given to prevent spontaneous ignition of molasses in tanks. István Finály





ELELMEZESI IPAR — FOOD INDUSTRY
VOL. IV. — 1950
No. 10, Oct.

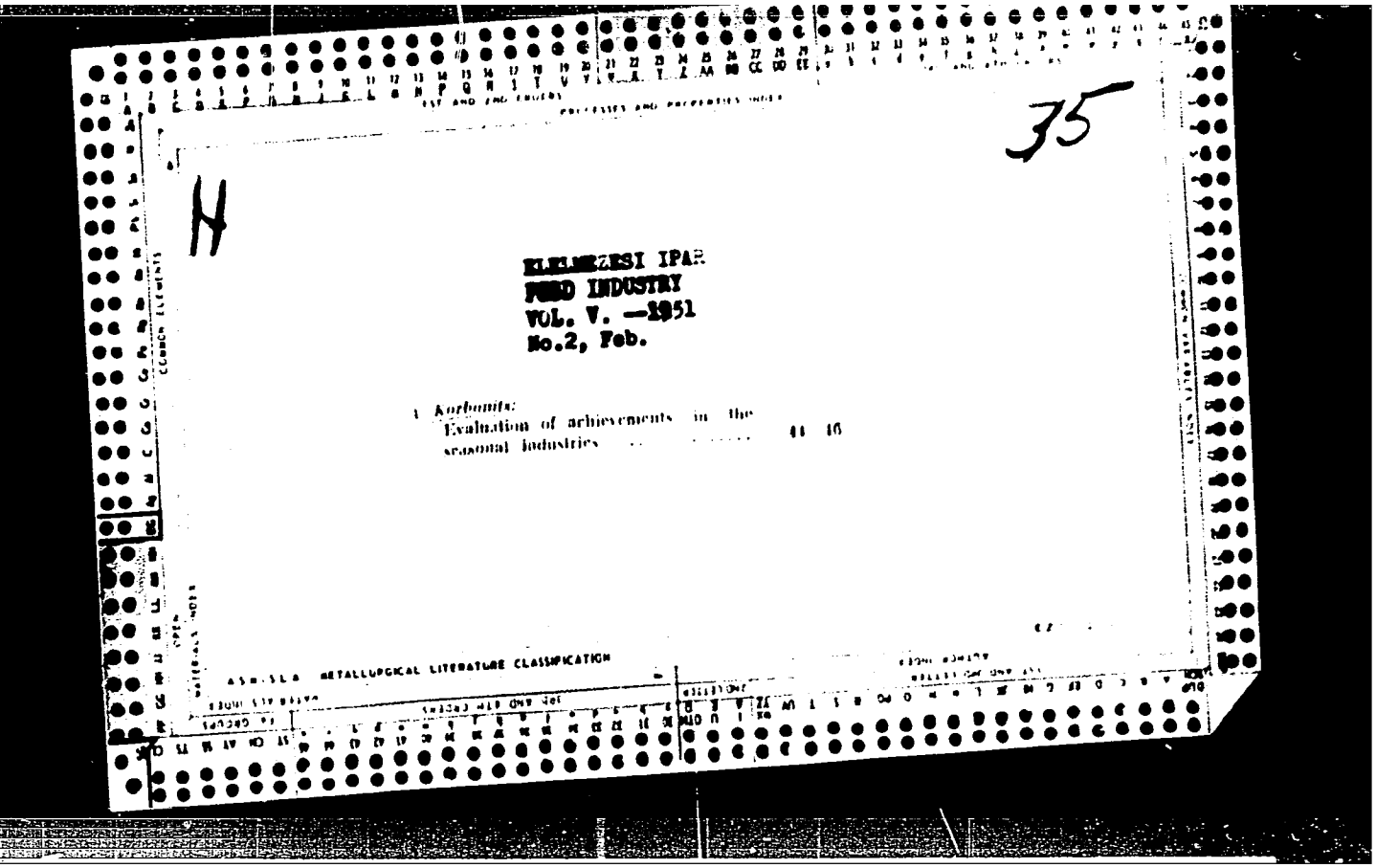
ELELMEZESI IPAR — FOOD INDUSTRY

Vol. IV. — 1950. — 1

No. 10, Oct.

I. Kurbanits and I. Solt: (651 (439)
Achievements of the Hungarian food industry in 1950 and its future goals pp. 3 - 4

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION



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75

ÉLELMEZÉSI IPAR
FOOD INDUSTRY
VOL. V. —1951
No.2, Feb.

1 Kurbanin:
Evaluation of achievements in the seasonal industries ... 41 46

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KORBUTIS, M.

67. Evaluation of various species of sugar beets. *A cukorrépafajták értékelése.* — A. Korbuits. (Textil industry. — *Ideiglenes Ipar.* — Vol. 6, 1955, No. 5, pp. 71–79.)

The "productivity index" (Pi_L), which is the quotient of the solar energy absorbed in the product (Q_{ab}) and the labour invested in the production (L_t), is suitable for the general evaluation of selectively used plant species. Hence the more solar energy is absorbed per labour invested the more valuable is the species. This relation is applicable for the general evaluation of sugar beet species as well by using the following equation:

$$Pi_{L_{sb}} = \frac{Q_s + Q_m + Q_c + Q_{fo} + Q_e}{L_{a_{ob}} + L_{a_{fb}} + L_{tr_{sb}} + L_{fbr_{sb}} + L_m + L_c + L_{fo} + L_e}$$

where $Pi_{L_{sb}}$ = productivity index; Q_s, Q_m, Q_c, Q_{fo}, Q_e = useful solar energy absorbed in sugar, molasses, slices, leaves etc.; $L_{a_{ob}}$ = labour invested in the cultivation of the field up to and including the last crop; $L_{a_{fb}}$, $L_{tr_{sb}}$, $L_{fbr_{sb}}$ = labour invested in the production, transportation and processing of the sugar beet; L_m, L_c, L_{fo}, L_e = extra labour invested in the production, storage and transportation of molasses, cossettes, leaves and other by-products. It is most convenient to express the Q and L values in calories per product obtained from one hectare. The Q values must be converted into the corresponding values of the final products used directly for human nutrition. In the case of carbohydrates it is sufficient to take the calorific values into account. But the net calorific values of products utilized in a special biological way must be increased correspondingly to the total biological value. Unproductive labour must be included in the values of L_t.

KORBONICH, ANDRAS

HUNGARY/Cultivated Plants. Potatoes. Vegetables. Melons M-5

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1603

Author : Andras Korbonich
Inst : Not Given
Title : Study of Tomato Varieties.

Orig Pub : Konzerv es Paprikaipar, 1955, augustus, 9-23

Abstract : No abstract

Card : 1/1

KORECNITS, J.

Problems of raw material in processing tomatoes. p. 113. ELELMEZESI IPAR. (mezogazdasagi Ipari Tudomanyos Egyesulet) Budapest. Vol. 10, no. 4, Apr. 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress Vol. 5, no. 8, August 1956

KORBONITS, A.

Circulation of the periodical Muszaki Lapszemie, Elelmiszeripar. p. 358.

ELEMEZESI IPAR. (Mezogazdasagi es Elemiszeri-pari Tudomanyos Eygesulent) Budapest, Hungary. Vol. 13, no. 11, Nov. 1959.

Monthly list of East European Accession (EEAI) LC Vol. [illegible]
9, no. 2, Feb. 1960

Uncl.

KORBONITS, Andras

The circulation of the periodical "Muszaki Lapszemle, Elelmiszeripar." Elelm ipar 13 no.11:358-359 N '59.

1. Kozponti Elelmiszeripari Kutato Intezet.

KORBONITS, Andras

Usefulness of "Muszaki Lapszemle, Elelmiszeripar." Cukor 13 no.1:31-32 Ja '60.

VUKOV, Konstantin, dr.; KORBONITS, Andras

Foreign periodical review. Cukor 14 no. 11:320-323 of cover. N '61

1. "Cukoripar" szerkeszto bizottsagi tagja (for Vukov).

KORBONITS, A.

Corrosion in the Italian sugar industry. Cukor 15 no.1:22 Ja '62.

KORBONITS, Andras

Technological evaluation of sugar beet. Cukor 15 no.3:84 Mr '62.

KORBONITS, Andras; JANOSFY, Karoly

Review of foreign periodicals. Cukor 15 no.3:94-96 Mr '62.

VUKOV, Konstantin, dr.; KORBONITS, Andras; FALVAI, dr.

Foreign periodical article reviews. Cukoripar 15 no.5:156-158 My '62.

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KORBONITS, Andras

Some problems relating to sugar losses in the Soviet sugar industry. Cukoripar 15 no.5:158-160 My '62.

KORBONITS, Andras

"Base beet storage" by A.V.Vishnevskiy. Reviewed by Andras Korbonits. Cukor 15 no.10:307-308 O '62.

KORBONITS, Andras

French terminology of the sugar industry. Cukor 14 no.5: 125-130 My '61.

1. Kozponti Elelmiszeripari Kutatointezet.

KORBONITS, Andras

"Application of hydrocyclones for the clarification of flotation-wash water" by P.N.Szilin [Silin, P.N.]. Reviewed by Andras Korbonits. Cukor 16 no.3:84 Mr '63.

KORBONITS, Andras

"New method for crystallising after-product massecuite" by I.M. Akindinov. Reviewed by Andras Korbonits. Cukor 16 no.3:84-85 Mr '63.

KORBONITS, Andras

"Improving the filtration of the juice of saturation I" by V.E. Pavlovszkij [Pavlovskiy, V.Ye.]. Reviewed by Andras Korbonits. Cukor 16 no.5:134 My '63.

KORBONITS, Andras

"Chemical removal of juice heater deposits" by V.Sz. Tkacsenko [Tkachenko, V.S.]. Reviewed by Andras Korbonits. Cukor 16 no.6:180 Je '63.

KORBONITS, Andras

"The Putsch-type continuous juice purifier" (from "Industries Alimentaires et Agricoles," vol.79, no.11, 1962). Reviewed by Andras Korbonits. Cukor 16 no.7:213 Jl '63.

KORBONITS, Andras

"Sugar wrapping machines". Reviewed by Andras Korbonits.
Cukor 16 no.8:248 Ag '63.

KORBONITS, Andras

"Filtering carbonated juice by bag filters" by P. Mattard. Reviewed by Andras Korbonits. Cukor 16 no.9:280-3 of cover. S. '63.

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"Hydrocyclonic equipment for purifying flotation water in the sugar industry" by B.M.Sahnovics, O.L.Pasztuhov. Reviewed by Andras Korbonits. Cukor 16 no.10:295 O '63.

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"Drying of granulated sugar and its effect on storage and transportation" by T.Rodgers, C.Lewis. Reviewed by Andras Korbonits. Cukor 16 no.10:300-301 O '63.

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"Removal of deposits from the preheaters of the 2d saturation" by G.T. Rubka. Reviewed by Andras Korbonits. Cukor 16 no.11: 310 N '63.

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"Factory air examination, germ counting, dust determination" by P. Devillers. Reviewed by Andra Korbonits. Cukor 16 no.11:319-320 N '63.

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"Reinforced concrete sugar silos" by F. De Dominicis. Reviewed by Andras Korbonits. Cukor 16 no.11:320-3 of cover N '63.

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"Corrosion of water preheating pipes" by M.N. Abdulah, P.M. Jakovenko. Reviewed by Andra Korbonits. Cukor 16 no.11:320 N '63.

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"Significance of nonsugar substances in the preparation of refined sugar" by J. Paul (from "Industries Alimentaires et Agricoles", vol. 79, no.7/8, 1962). Reviewed by Andras Korbonits. Cukor 16 no.5:140 My '62.

1. Cukoripari Kutatointezet.

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"Safety rules for the treatment of hydrochloric acid, formaldehyde, caustic soda and their solutions" by Farhi, Morel, Cavigneaux. Reviewed by Andras Korbonits. Cukor 17 no. 1: 31-32 Ja '64.

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Diffusers with continuous operation. Cukor 17 no. 5: 154-156 My '64.

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"Natural alkalinity" by P.M. Silin. Reviewed by Andras Korbonits. Cukor 17 no.9:266 S '64.

KORBONITS, Andras

"Subsequent removal of sugar beet leaves on the inclined grates of harvesters" by V. Sz. Jacenko. Reviewed by Andras Korbonits. Cukor 18 no.1:29-30 Ja '65.

KORBONITS, Andras

"Debate with a French weekly about the degree of river pollution caused by sugar factories". Reviewed by Andras Korbonits. Cukor 18 no.3:3 of cover Mr '65.

KORBONITS, Andras

Diffusion-J as reflected in Soviet technical literature. Cukor 18 no.3:70-73 Mr '65.

KORBONITS, Andras

"Accelerating the sedimentation of carbonated juices by means of high-molecular flocculation agents" by Ju. D. Golovnjak, A. K. Kartasov. Reviewed by Andras Korbonits. Cukor 18 no.3:97-98 Mr '65.

KORBONITS, Andras

"Examination of some hydrodynamic questions of evaporators" by I. N. Zasyad'ko. Reviewed by Andras Korbonits. Cukor 18 no.3:98-99 Mr '65.

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French vocabulary of sugar beet growing. Cukor 18 no.4:120-128 Ap '65.